NORTHWOODS JOURNAL – MARCH 2022

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

In This Issue:

Meet the New Marinette County Conservationist, Sheri Denowski

https://www.marinettecounty.com/departments/land-information/land-water-conservation/

Hello! I am Sheri Denowski, the new County Conservationist in Marinette County. I am excited to join the terrific conservation staff in Marinette County who have been working to protect our soil and water.

I grew up in the bluff country of western Wisconsin (Nelson) on a small dairy farm, and my heart continues to be with agriculture and how to have sustainable farms that work with the environment to be successful. I am also looking forward to being involved in protecting and restoring wetlands, riverbanks, shorelines and our groundwater.

I graduated from UW-La Crosse with an accounting degree and worked in that field for 14 years. I then got a bachelor's degree in Environmental Science from Oregon State University which allowed me to make a career change and to get outside for work. I worked as a Soil Conservation Technician with the USDA-Natural Resources Conservation Service in Clark County for 4+ years and then 6 years as a Conservation Engineering Technician with the Land Conservation Department in Clark County.

I am thankful for all of the opportunities I have had to work with the hardworking landowners and contractors in Clark County and am now looking forward to making connections here in Marinette County.

I have a wonderful family: My husband, Dave, is originally from Crivitz, so we are happy to be moving close to family here. We have a daughter and son in law who live in Platteville, WI and another daughter who lives in Waco, TX. When I'm not at work, I enjoy being in the outdoors…kayaking, hiking, snowshoeing, hunting, camping, gardening, swimming, fishing, etc. I also love to read and to serve in the community.

I will look forward to hearing from you with questions or comments about conservation in Marinette County! Contact me by email at Sheri.Denowski@marinettecounty.com or by phone at: (715) 732-7783.

What is Marinette County Land & Water Conservation?

The Marinette County Land & Water Conservation Division is part of the Land Information Department. We provide a wide variety of services regarding water resource information, water pollution prevention and environmental education along with many other programs and services. We also administer several state programs, including the Wildlife Damage Abatement and Claims Program. Our office provides cost-sharing, technical assistance and educational programs to help conserve Marinette County land & water resources.

Our mission is "Dedicated to promoting the protection, restoration and wise use of our land & water resources." Please visit us with questions or concerns at the Marinette County Resource Center, 1925 Ella Court in Marinette (across the street from the Mariner Theater). We are located on the second floor. Contact us by phone at 715-732-7780 and our mailing address is 1926 Hall Avenue, Marinette, WI 54143-1717.

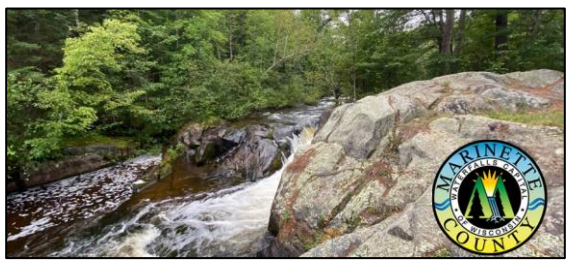
https://www.marinettecounty.com/departments/land-information/land-water-conservation/

or visit us on Facebook!

https://www.facebook.com/people/Marinette-County-Land-Water-Conservation/100075727761451/

2022 Marinette County Parks Stickers Now Available

https://www.marinettecounty.com/parks/permits_and_passes/general/2022_annual_park_sticker/



The 2022 annual Marinette County parks stickers are now available! Marinette County operates 22 county park properties: 11 scenic "large parks" with 6 of them offering well-kept, beautifully wooded campgrounds, 4 small day use/wayside parks, 6 boat landings, and a youth camp. Come hike, picnic, whitewater raft, fish, or just relax and enjoy the beautiful scenery. View them here.

Outdoor gazebo at Goodman Park

You can purchase stickers online at the website above, or visit the Marinette County Parks Department office in the Marinette County Courthouse. Other vendors around the county include:

- A&K Bait & Tackle, 1616 Shore Drive, Marinette
- T & B One stop, Hwy. 141, Crivitz
- BP Hwy. 141 (828 Main St.), Wausaukee
- Driftwood Sport Shop, Hwy. 141 & County V, Amberg
- Pembine Automotive, Hwy. 141
- Eight Hi Club, Hwy. 8, Goodman
- High Falls One Stop, Cty. X & Kottke Rd., Crivitz
- Tall Oaks, Parkway Rd. & Engel Ln., Crivitz
- Corner Convenience, W11701 Cty. Rd. W, Crivitz
- Red Pine BP, Hwy. C & Parkway Rd., Athelstane
- Athelstane Market, N12780 CTH AC, Athelstane

(https://www.marinettecounty.com/i_marinette/d/Parks/sticker_vendors_2021.pdf)

Quiver falls is near a calmer, wider portion of the Menominee River, just east of Pembine.

The Annual Park Vehicle Sticker will arrive to you by mail. The sticker must be permanently affixed to the corner of the windshield on the passenger side of the vehicle. Temporary placement (such as tape, clear plastic envelopes, etc.) will not be accepted.

Sticker is only for the vehicle it was purchased for. It shall not be given away, exchanged or sold. If you have a second car, you must purchase a second sticker at full price.

To receive a Senior Citizen or Military discount, sticker must be purchased at the Courthouse in Marinette. No Vendors are permitted to give a discount. Marinette County does not guarantee that all parks will be accessible at all times. Daily fees paid at Marinette County Parks do not apply towards the payment of the Annual Vehicle Sticker.

NOTES:

1. The Annual Sticker is only for day use of parks and boat landings. Camping costs are extra. Campers, please note that day use fee is included in the camping fees - two vehicle stickers are included when you register and good for length of stay.

2. An Annual Sticker is not always available during the summer season from a park employee at the park. When a park employee is not available to sell you an Annual Sticker, you must immediately purchase a one-day vehicle permit in order to use a park. The one-day permit cost is $5.00 and is available at the park entrance or on-line. No change is available at the park so please bring exact money with you. One-day use permit is good for all county parks that are visited that same day.

Marinette County Parks and Boat Landings

- Twin Bridges Park
- Thunder Mountain Park
- Menominee River Park
- Lake Noquebay Park
- Long Slide Falls Park
- McClintock Park
- Dave's Falls Park
- Morgan Park
- Michaelis Park
- Goodman Park
- Veteran's Memorial Park
- Twelve Foot Falls Park
- Dolan Lake Park
- Crystal Springs
- McAllister Boat Landing
- Cox Boat Landing
- Little River Boat Landing
- Bear Point Boat Landing
- Twin Creeks Boat Landing

History of the Parks

Marinette County Parks were, for the most part, developed individually by various groups in each town. The County, over a period of time, gathered these individual parks into an integrated Parks system. Here is a short description of each park property located on Marinette County Forest Lands.

18-foot Falls near Pembine

Goodman Park is situated on one of the most beautiful spots of the Peshtigo River at Strong Falls. It was acquired by Marinette County on a land exchange with the Goodman Lumber Company. In 1936, work was started by CCC Camp Dunbar on the development of Strong Falls on the Peshtigo River as a demonstration of the recreational use of county forest lands. This area was established by County Board Resolution #53 on September 23, 1936. On September 12, 1938, by Board Resolution #36, was named Goodman Park in honor of Robert B. Goodman of Marinette, prominent lumberman and conservationist, who had done so much for Marinette County in the early days of land-use and forestry studies.

The Dunbar CCC built a large log shelter with a fireplace in both ends, and a shelter house for small groups of people. A caretaker's cabin, garage and workshop also were built. The entire area was landscaped, and other facilities required for a park area were constructed.

McClintock Park – The park lands were purchased from Eleanor McClintock in 1936. McClintock Park is the "bridge park". Four laminated, wood bridges are located over rapids in the upper Peshtigo River in northwestern Marinette County. It is a beautiful place to take pictures and have a picnic. Camping with direct access to the ATV trail is also available.

Morgan Park – In 1958, Marinette County accepted responsibility for developing the park from local youth and civic groups. The park was named after James C. Morgan, a County Board Member who was particularly active in establishing the Marinette County Forest. Morgan Park is located on Timm's Lake, six miles east of Pembine.

Twelve Foot Falls Park – This park was built in 1956 and 1957 in the center of the County's largest forest plantation. The construction work was done by the Marinette County Forestry Department. Old time river drivers, who helped move the pine timber logged in the area named the falls by the distance the river dropped over the rock edge. Rustic camping sites are located near the reflecting pool of the falls.

Veteran's Memorial Park – This park was developed by the American Legion and other civic organizations. Located on Parkway Road in the Town of Stephenson, it features a footbridge over a waterfall. The reflecting pool at the bottom of the falls often plays host to local trout fisherman. Rustic camping and a large day-use area are also available.

Camp Bird Youth Center – Camp Bird was established by the Marinette County Board in 1939. It was built by the WPA in 1940-41-42. The camp features log cabin style, "resort-type" accommodations, and features several 325-year-old plus red pines and a beautiful sand beach on Sand Lake. The camp is used by the 4-H, church groups, school groups, the Girl Scouts and many others. Local young people benefit through recreation and environmental education programs offered at the youth camp.

March 3rd is World Wildlife Day

https://wildlifeday.org/ and https://www.facebook.com/WorldWildlifeDay/

On 20 December 2013, at its 68th session, the United Nations General Assembly (UNGA) proclaimed 3 March – the day of signature of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1973 – as UN World Wildlife Day to celebrate and raise awareness of the world's wild animals and plants.

The UNGA resolution also designated the CITES Secretariat as the facilitator for the global observance of this special day for wildlife on the UN calendar. World Wildlife Day has now become the most important global annual event dedicated to wildlife.

World Wildlife Day (WWD) will be celebrated in 2022 under the theme "**Recovering key species for ecosystem restoration**". The celebrations will seek to draw attention to the conservation status of some of the most critically endangered species of wild fauna and flora, and to drive discussions towards imagining and implementing solutions to conserve them. All conversations will be inspired by and seek to inform efforts towards the achievement of UN Sustainable Development Goals 1 (*No Poverty*), 2 (*Zero hunger*) 12 (*Ensure sustainable consumption and production patterns*), 13 (*Climate Action*) 14 (*Life Below Water*) and 15 (*Life on Land*).

According to data from the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, over 8,400 species of wild fauna and flora are critically endangered, while close to 30,000 more are understood to be endangered or vulnerable. Based on these estimates, it is suggested that over a million species are threatened with extinction.

The American Marten is an endangered species in Wisconsin. They prefer forests with a mixture of conifers and deciduous trees including hemlock, white pine, yellow birch, maple, fir and spruce.

Continued loss of species, habitats and ecosystems also threatens all life on Earth, including us. People everywhere rely on wildlife and biodiversity-based resources to meet all our needs, from food, to fuel, medicines, housing, and clothing. Millions of people also rely on nature as the source of their livelihoods and economic opportunities.

In 2022, World Wildlife Day will therefore drive the debate towards the imperative need to reverse the fate of the most critically endangered species, to support the restoration of their habitats and ecosystems and to promote their sustainable use by humanity.

Because it inhabits small streams and headwaters, this slippershell mussel is particularly vulnerable to siltation and pollution from runoff. Increased development along waterways in southeastern and northeastern Wisconsin is of great concern to the continued existence of this species.

World Wildlife Day 2022 Virtual Global Event

The 2022 celebration will be held online, and will seek to bring together representatives of UN member States, UN System organizations and multilateral environmental agreements, civil society, and the private sector for a series of discussions along the theme of "*Recovering key species for ecosystem restoration*". The provisional agenda can be found on this link. The event will be live streamed on YouTube on March 3 2022. Click to go to the World Wildlife Day official YouTube channel.

Other events from around the Globe

World Wildlife Day is not about any one single event. The Day has been observed in the past by people, groups and authorities around the world and in various ways. Visit https://wildlifeday.org/events?field_event_country_taxa_tid=225 for more about these events.

The extra-striped snaketail dragonfly, an endangered species, occurs in parts of northern Marinette County.

For more about Marinette County's threatened and endangered species, and what is being done to help them visit:

- https://dnr.wi.gov/topic/endangeredresources/animals.asp - WDNR endangered/threatened species list
- https://p.widencdn.net/byxof6/ER001 - WI endangered & threatened species list and laws
- https://dnr.wisconsin.gov/topic/endangeredresources/biodiversity
- https://www.fws.gov/midwest/endangered/lists/wisc-cty.html - WI species list by county – US Fish & Wildlife Service

Wood Turtles, a threatened Wisconsin species, are found primarily in or near moving water and associated riparian habitats. Major threats are habitat degradation and fragmentation, road mortality, and nest predation.

Be a Monarch Butterfly 'Parent' this Spring & Summer!

Do you want to help out wildlife this year? Why not provide habitat for pollinators and raise some monarch larva? At https://monarchwatch.org/ you can order monarch 'rearing kits' to help raise larva at home, provided you have milkweed plants to feed them (there are several species in Wisconsin). It's a great activity and the proceeds go to help the Monarch Watch organization. Read more about it below!

Monarch Watch is a nonprofit education, conservation, and research program based at the University of Kansas that focuses on the monarch butterfly, its habitat, and its spectacular fall migration. Monarch Watch was founded in 1992 by Dr. Orley "Chip" Taylor and the monarch tagging program was launched in the fall of that year.

Mission Statement: Monarch Watch strives to provide the public with information about the biology of monarch butterflies, their spectacular migration, and how to use monarchs to further science education in primary and secondary schools. We engage in research on monarch migration biology and monarch population dynamics to better understand how to conserve the monarch migration. We also promote protection of monarch habitats throughout North America.

Monarch larva on butterflyweed (*Asclepias tuberosa)*, one of our local species of milkweed.

Vision Statement: In recognition of the rapid loss of habitats and resources needed by monarch butterflies in the United States, Canada, and Mexico, it is clear that the preservation of the monarch migration will require stewardship by the governments and private citizens of all three countries. We all must work together to create, conserve, and protect monarch habitats. Sustaining monarch habitats will have the effect of protecting vital pollinators and other wildlife (from https://monarchwatch.org/about/index.htm).

Monarch Watch.org
Education • Conservation • Research

Other good resources about monarchs and other pollinators include:

- https://monarchjointventure.org/
- https://www.xerces.org/
- https://dnr.wisconsin.gov/topic/endangeredresources/pollinators.html

DNR Began Winter Prescribed Burns in February

https://dnr.wisconsin.gov/newsroom/release/52906

A prescribed burn taking place at Vernon Marsh in Waukesha County in late January 2021.

The Wisconsin Department of Natural Resources (DNR) today announced that starting tomorrow, Feb. 1, fire management crews will conduct prescribed burns on DNR properties throughout the state. The first prescribed burns of the season were held Feb. 1 at Horicon Marsh Wildlife Area in southeast Wisconsin.

Forecasted weather conditions indicate optimal conditions for the burns, which help reduce the chance for wildfires by removing excess dead plant material. Prescribed burns also support healthy ecosystems for an abundance of plants and animals in Wisconsin.

The DNR's fire management crews plan to burn cattail marshes, clearing buildup of dead vegetation and opening waterways for waterfowl to feed and nest. By burning in winter, DNR staff take advantage of wet conditions and frozen ground, which reduces the heat and intensity of cattail marsh burns.

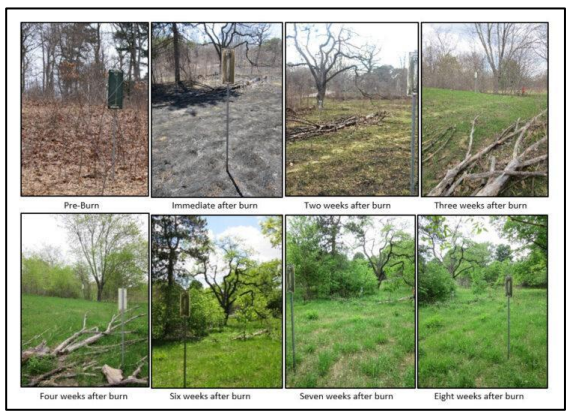
Winter cattail marsh burns also mark the beginning of the fire management season for DNR crews. Additional windows of opportunity for prescribed burning will continue through spring, and open again in late summer and fall (mid-July through November).

Many plant communities in Wisconsin developed over time to benefit from periodic fire. Many of these communities, such as prairie, wetland, oak/pine barrens and oak savanna, would not exist without occasional fires to restore the balance between open grass and brush. The DNR's prescribed burns are conducted for the health of these ecosystems and mimic the natural benefits that fire historically provided. These benefits include a decrease in dead grass (thatch) buildup, improved spaces for wildlife to feed, nest and raise young and an increase in native grass and wildflower growth.

New growth in the aftermath of a fire

Before every prescribed burn season, DNR staff spend months comprehensively planning for the safety and ecological benefit of each burn. DNR staff make the decision to conduct prescribed burns only when weather and vegetation conditions meet strict standards for safety, smoke management, and burn effectiveness.

Even after such careful planning, weather forecast evaluations, vegetation moisture measurements and staff trainings, each burn is reassessed on the morning of the burn and at the burn site. The DNR also notifies local law enforcement and fire officials in advance about when and where DNR prescribed burns will take place.



For this year, all burns conducted on DNR land will continue to follow additional Covid-19 operational protocols to further minimize health and safety risks to burn crews and the general public. When conducting prescribed burns near roads or recreational trails, the DNR will post signs on the morning of the burn to notify the public. For public safety, please avoid these areas while the burn is being conducted.

To view the current daily status of where prescribed burns are occurring across the state, visit the DNR WisBURN page, click "View Current Fires," and show "Today's Prescribed Burns." For a more detailed look at historic, current and planned DNR prescribed burns, visit the DNR Prescribed Fire Dashboard.

For more information regarding the benefits of prescribed burning in Wisconsin, visit this DNR webpage. We encourage emailed comments, which can be sent to Michele Witecha, DNR Prescribed Fire Specialist (michele.witecha@wisconsin.gov), or call 608-333-3664.

For more about prescribed burns and their benefits, visit:

- https://prescribedfire.org/learn/why-we-burn/ - WI Prescribed Fire Council
- https://www.nps.gov/articles/what-is-a-prescribed-fire.htm - National Park Service
- https://www.michigan.gov/dnr/0,4570,7-350-79136_79237_80917-55955--,00.html – Michigan DNR
- https://www.treehugger.com/what-are-controlled-burns-5180668

Reminder: Wisconsin Fire Season Is on Its Way

https://dnr.wisconsin.gov/newsroom/release/42521

Spring in Wisconsin has the highest fire risk with the No. 1 cause of wildfires being debris burning. Most of these debris fires occur in the spring after the snow-cover melts and before vegetation greens up. ***People cause over 98% of all wildfires in Wisconsin.***

When the ground is completely snow-covered, you can burn in DNR protection areas without a DNR burning permit. Be sure to check with your local municipality, which may have additional restrictions.

With the cold temps we've been experiencing, spring may be the last thing on your mind. But with portions of the state already having limited snow coverage, it's important to think ahead now. Here are some tips for safe winter burning:

- Only burn brush piles that were covered with a tarp in fall and remained covered for several months.
- Notify the local fire department and dispatch offices in advance to avoid unnecessary fire response.
- Gather and pile brush in an open area away from over-hanging branches.
- When you are ready to burn, choose a calm day (winds less than 8 mph) with complete snow-cover on the ground. Snow must be contiguous and adjacent to the fire and remain for the duration of the burn.
- Place small amounts of crumpled clean paper into the brush around the base of the pile.
- Light the paper all around the base of the pile. Do not use the fire to dispose of household garbage, rubber tires, oil or other accelerants.
- Turn the debris using a rake or shovel while in the flames to ensure all the materials are completely burned.
- Never leave the fire unattended.

When the fire is out, consider gathering nutrient-rich cold embers to use in flower beds and gardens in the spring.

Get up-to-speed on Wisconsin's wildfire season early on the DNR's website.

For more about causes of wildfires, visit https://dnr.wisconsin.gov/topic/forestfire/causes and learn how to prevent them.

Climate Connections: Wisconsin's Lakes are Warming Up. That May Spell Trouble for Species Below the Surface.

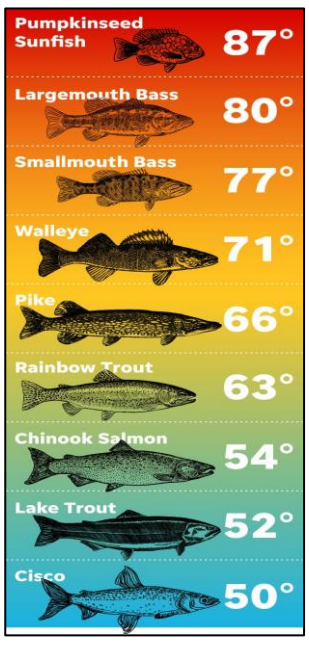
Excerpts from https://spectrumnews1.com/wi/milwaukee/news/2022/02/04/climate-connections--wisconsin-s-lakes-are-warming-up--that-may-spell-trouble-for-species-below-the-surface

Consider the walleye. With its big, glassy eyes and sharp teeth, the fish has wriggled its way to icon status among Wisconsin's wildlife. Known as *ogaa* in the Ojibwe language, the fish has long been a cultural and dietary staple for tribes in the Great Lakes. And for the many anglers casting their lines across the state, the walleye has become a prized catch. "Walleye is definitely a Wisconsin fish that people think of," said Titus Seilheimer, fisheries specialist with Wisconsin Sea Grant. "When they go fishing up north, they're fishing for walleye."

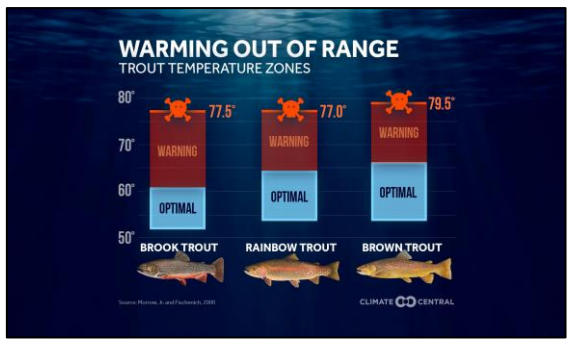
But the walleyes of today face a big problem. These fish prefer to hang out in cool waters — and as climate change turns up the temperature in Wisconsin, they may lose out on some of that chilly habitat. They're far from the only species to be feeling the heat. Across Wisconsin's more than 15,000 lakes, the impacts of climate change — from temperature shifts to water level extremes — are transforming the ecosystems under the surface, and affecting the humans along the shore.

In hot water

The Badger State has already seen temperatures tick upwards in recent decades — and the shifts so far are just the beginning, according to predictions from the Wisconsin Initiative on Climate Change Impacts (WICCI). "Continuing into the future, we're looking at less ice cover and warmer waters," Seilheimer said. "So that is going to really impact a lot of species." Wisconsin's lakes have already heated over the decades — a change that's mostly been observed close to the surface, but sometimes may stretch into deeper waters. Temperature shifts can have a direct impact on what species can survive, Seilheimer said. Many fish have evolved to live in certain temperature ranges — and if the heat gets cranked up too high, they might start disappearing from lakes where they used to thrive.



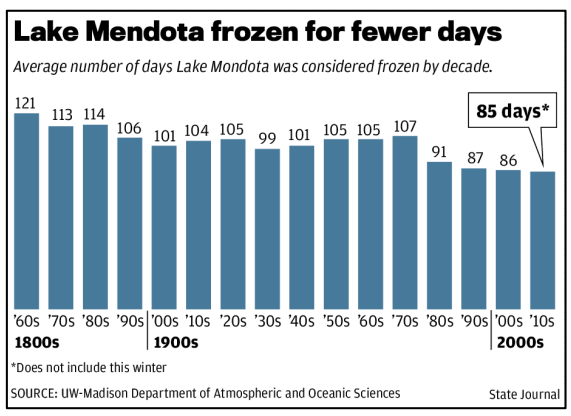
That could spell trouble for some important Wisconsin species, explained Aaron Shultz, climate change fisheries biologist with the Great Lakes Indian Fish and Wildlife Commission (GLIFWC). Fish like walleye, cisco (or *adikamig*), and lake trout (or *namegos*) are all better suited to chilly waters, he said. "Any species that prefers cool water or cold water, they're going to be more vulnerable than the other beings that prefer warmer habitats," Shultz said.



From www.climatecentral.org

Research has found that walleye populations in Wisconsin have already been losing ground in recent decades — while largemouth bass, which are happier in warmer waters, have seen their numbers climb. A GLIFWC report estimated that only 35% of the Wisconsin lakes that support naturally reproducing walleye today will still be able to do so by 2050.

And the direct temperature effects are just one piece of the story. Warming waters can create "cascading impacts" throughout different parts of the ecosystem, said Madeline Magee, the Great Lakes and Mississippi River monitoring coordinator at the DNR. Some species depend on ice cover to shelter their eggs through the winter until they hatch in the spring, Seilheimer said. But many lakes across the state are seeing shorter periods of ice cover: Magee pointed to Lake Mendota, where the average ice cover period has gotten about a month shorter in the past century.



Climate change could also lead to mismatches between different parts of the food web, Seilheimer pointed out. For example, it might leave fish that hatch at the wrong time without the prey they need to survive. "Say you're a whitefish. You're an incubating egg over the winter, and spring comes around — you're there, you're ready, you hatch," he said. "Is that zooplankton there? You need that food right then."

Unwanted visitors like invasive species and harmful algal blooms may also be more likely to turn up as lake temperatures rise, Magee added. In a complicated ecosystem, it's hard to pinpoint what exactly is causing problems, she said. But when climate change interacts with — and possibly intensifies — other stresses to the system, it can become a lot for lakes to deal with. "If you're dealing with one stressor, you can usually be kind of resilient to it," Magee said. "If you're dealing with two or three or four stressors, it's a lot harder to juggle everything. Well, that's the same for a lake, essentially."

Higher highs, lower lows

Wisconsin isn't just becoming warmer. It's also becoming wetter — and especially seeing more extreme precipitation events, according to WICCI predictions. "That's where the future is going tobe: More variable and more extreme," Seilheimer said.

It's hard to predict exactly how this will affect the water levels in Wisconsin's lakes, said Katie Hein, lake monitoring technical lead for the DNR. Extreme rainfall could cause high lake levels and flooding, but hotter temperatures could bring lake levels back down and lead to droughts. While it's normal for lakes to see cycles of higher and lower water levels, Hein explained, a future under climate change could make both ends of that spectrum more intense.

Some ups and downs in lake levels are actually good for lake ecology, Hein said. Wetland plants, for example, grow in shallow water but need dry conditions to germinate. Too-extreme changes can cause some chaos for species, she said — like when low lake levels in northern Wisconsin left perch's preferred woody habitat stranded above water. Since the perch had nowhere to hide, bass "had a heyday and ate a ton of perch," she said, causing the population to crash. Still, the fluctuating water levels present a problem "more so for the human side," she said.

One dramatic example comes from Fish Lake in northern Dane County, which has seen a "pretty wild" rise of 17 feet since the 1970s, Hein said. Despite efforts to pump excess water out of the lake, floods still destroyed homes along the shoreline and pushed families to move. With increasing precipitation, these types of flooding events are looking to become more common, she said.

Two houses fall into an emptied Lake Delton Tuesday, June 10, 2008, in Lake Delton, Wis., after the 267-acre lake overflowed and drained.

Figuring out how to adapt to those threats — for the lakes' sake and ours — will be a key part of our climate future. "It's not just all doom and gloom," Hein said. "There's going to be changes, and how are we going to change with the lakes? And how are we going to help the lakes be resilient to change?"

'We have our lakes in common'

For many in the state, Wisconsin's lakes contain something thicker than water. Hein thinks of the lakes as "the gem of Wisconsin." Magee pointed out that they're a part of the culture that connects people throughout the state — across generations, backgrounds and political leanings. "We don't necessarily have a ton in common," Magee said. "But we have our lakes in common." That appreciation for our lakes can make it hard to accept how they might change with the climate, Seilheimer said.

A vulnerable species like walleye, for example, isn't just part of a fishing industry that brings in an estimated $1.9 billion to the economy each year — it also holds a deeper value. "The tribes have relied on walleye for long, long periods of time. It's a cultural resource, it's part of ceremonies, it's part of feasts," Shultz said. "And then, on the other side, recreational anglers grew up fishing walleye up here. It's tradition."

As the climate transforms, those in Wisconsin and beyond will grapple with these kinds of key

Continued next page

Wisconsin Water Week is April 4-8 in Stevens Point

https://wisconsinwaterweek.org/home/lakes-and-rivers-convention/

2022 Wisconsin Lakes and Rivers Convention

April 6-8 Stevens Point

Welcome to the 44th annual Wisconsin Lakes and Rivers Convention website! This year's statewide convention is again part of Wisconsin Water Week, and brought to you by the Wisconsin Department of Natural Resources, Extension Lakes, Wisconsin Lakes, and Water Action Volunteers.

This year's theme is **Protecting What We Love for the Future**. The hands-on workshops and engaging presentations during this year's event will be centered around this theme of protecting our water resources. Our look "to the future" means we will also be focusing on success stories and recommendations of resilience, adaptation, and action in a changing climate.

We will also be intentional about highlighting efforts and ideas that support diversity, equity, and inclusion in water resource protection and management. Mark your calendars for April 6-8, 2022 and join this unique group of citizen scientists, businesses, and lake, river, and wetland professionals. This event will also have a virtual component for those who are unable to attend in person – see the Agenda page for more details.

Keynote speakers include Charlie Wooley, U.S. Fish & Wildlife Service Midwest Regional Director, who will be sharing how major legislative and funding victories are poised to fuel on-the-ground conservation and restoration projects impacting waterways, habitat, and fish in Wisconsin. Chad Pregracke from Living Lands & Waters will also be there inspiring and energizing participants with stories of protection, preservation, and restoration of the nations' major rivers and their watersheds.

Water is fundamental to Wisconsin's identity. Wisconsin Water Week is a time for everyone and anyone to learn more about what's happening with our precious water resources and how they can be involved in protecting and restoring them. In addition to the Wisconsin Lakes and Rivers Convention in Stevens Point, Water Week offers additional local and regional in-person events as well as online opportunities for people to connect and engage with others on water-related issues.

This year's theme is *Protecting What We Love for the Future*. Hands-on workshops and engaging presentations will be centered around this theme of protecting our water resources.

- Wednesday, April 6, will feature half-day or full-day workshops for you to choose from. Pre-registration is required for these workshops, which fill up quickly.
- Thursday, April 7, will feature 35+ concurrent sessions, educational and business exhibits, lightning and poster presentations, keynote speaker Charlie Wooley, an authors' event, and the Lake Stewardship and Volunteer Stream Monitoring Awards Ceremony and Banquet.
- Friday, April 8, will feature 35+ concurrent sessions, educational and business exhibits, and keynote speaker Chad Pregracke.

Virtual attendance is available on Thursday and Friday for those who cannot make it in person. Virtual attendees will have access to one of the six in-person streams, focusing on Hot Topics, keynote speakers on both Thursday and Friday, and Thursday's lightning talks. You must have the ability to use Zoom to join these events.

Face coverings will be required at this indoor event while Portage County is at the "high" or "substantial" community transmission level for coronavirus. Should the transmission rate change for the better, we may update this requirement in accordance with CDC masking guidance. Thank you for your understanding and compliance. The health and safety of our presenters and attendees is important to us, so please bring a mask for each day you are attending. Learn more and register by visiting wisconsinwaterweek.org

Other Water-Related Events in March

March 6-12 is National Groundwater Awareness Week. National Groundwater Awareness Week, an initiative created by the National Ground Water Association, is slated for March 6-12, 2022. This week serves as an annual reminder for water well owners to test, tend, and treat their private water systems. NGWA encourages annual inspections of private water systems by certified water well contractors to ensure systems are operating correctly and producing safe and healthy water. Our most valuable and precious resource needs advocates who understand the importance groundwater plays in our lives and community.

And March 22 is World Water Day, https://www.worldwaterday.org/. It is an annual United Nations Observance, started in 1993, that celebrates water and raises awareness of the 2 billion people currently living without access to safe water. A core focus of World Water Day is to inspire action towards Sustainable Development Goal (SDG) 6: water and sanitation for all by 2030. We must protect groundwater from pollution and use it sustainably, balancing the needs of people and the planet.

Continued from page 5 – Climate Connections

questions about how long to keep fighting those battles — and how much change to accept in our waters.

"We have certain expectations for lakes. And that might be, 'Well, you know, this was a walleye lake, it's always been a walleye lake, I want it to be a walleye lake,'" Seilheimer said. "That might be a reality where you can't always have the lake that you want. You have the lake that you have."

Magee expects that the next 10 to 15 years will only see more changes to the lakes, and to how we're able to interact with them. Our climate future might place more limits on how we're able to spend time on the lakes, she pointed out — from ice fishing and snowmobiling to jet skiing and going to the beach.

Keeping the "new normal" of highs and lows in mind will also be important for infrastructure, Hein said, like leaving a natural buffer between homes and the lakefront or building piers that can move with the lakes' cycles.

Hein added that leaving nature in place when lake levels drop, instead of rushing in to clean up the beach, can help preserve important habitat. "We need to let nature have space to move," she said. And reducing greenhouse gas emissions or taking other steps to slow down climate change will help the lakes, too, Seilheimer pointed out.

To be clear, there are still steps that conservationists and everyday people can take to help our lakes, Magee said. Measures like reducing nutrient runoff, managing invasive species and leaving woody debris for fish to spawn in can help lake ecosystems be more resilient to climate change, she said.

For more about this topic, visit:

- https://www.freep.com/in-depth/news/local/michigan/2019/09/16/climate-change-transforming-great-lakes-fish-habitats/2223549001/
- https://dnr.wisconsin.gov/newsroom/release/53296

Northwoods Journal Online

Would you like to read current issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and search for 'Northwoods Journal". We can also send you an e-mail reminder when each new issue is posted online. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email abartels@marinettecounty.com.

10 Fun Facts About the Red-tailed Hawk

https://www.audubon.org/news/10-fun-facts-about-red-tailed-hawk

The Red-tailed Hawk is a great gateway species into birding or hawk watching. Among the large, soaring hawks known as **buteos**, Red-tails are the most widespread in North America. They often hunt along highways, circling overhead or hovering in place as they scan the ground for prey. You've probably seen one from a distance, but here is a closer look at this magnificent bird.

1.) Though they were known among North America's Indigenous peoples, the first Red-tailed Hawks studied by Western scientists were identified in Jamaica in 1781 and named accordingly: *Buteo jamaicensis*. Their other namesake is their characteristic reddish-brown tail feathers, a trait shared by many of these hawks - but not all. Juveniles don't get the red feathers until the start of their second year, instead sporting brown barred tails. Plus, with 14 subspecies and many color morphs, adult Red-tailed Hawks have a variety of plumages.

2.) Red-tails are among the largest hawks in North America, second only to the Ferruginous Hawk. They're built to soar, with wingspans that average a little over four feet. Females are typically much larger than males, which is common among raptors.

3.) Adult Red-tailed Hawks make a majestic call - a hoarse screech that lasts for two to three seconds. If this sounds familiar, it's probably because Hollywood loves it. Many movies play a Red-tailed Hawk sound when a Bald Eagle appears on screen! Though the eagle looks intimidating, it makes a paltry squeal compared to the adult hawk's piercing cry. Juvenile Red-tails, on the other hand, emit a series of short shrieks.

4.) As their threatening call suggests, Red-tailed Hawks are formidable hunters. They scan the ground by soaring in wide circles or by perching on a tree or telephone pole. Then, they snatch their prey – usually a rodent or other small mammal, but sometimes a snake or another bird - with talons up to 1.33 inches long.

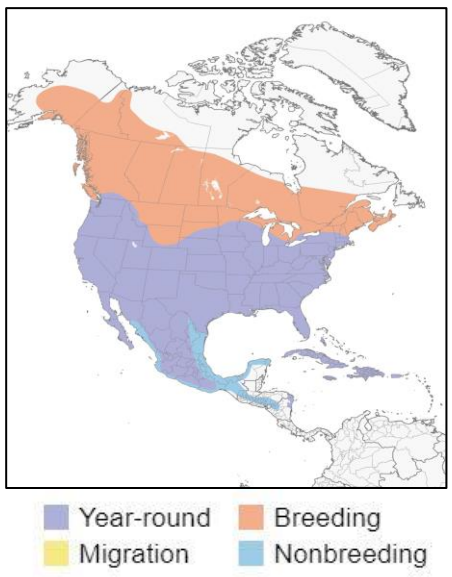
5.) Red-tailed Hawks have sharp eyesight that's eight times better than a human's. In flight, they can spy a mouse on the ground from 100 feet in the air. To keep their eyes clean, birds have a third eyelid called a **nictitating membrane** (below). Red-tailed Hawks can close this extra eyelid when perched to shield their eyes from wind, or for protection when diving to make a kill.

The nictitating membrane (nictitans, from Latin *nictare*, to blink) is a transparent, or more often translucent, membrane that can move horizontally across the eye. Fully developed nictitans are found in many fish, amphibians, reptiles, birds and mammals, but are rare in primates.

6.) To woo a mate, a male Red-tailed Hawk might catch prey and pass it to a female in midair or perform repeated dives. In courtship rituals, the male and female fly in circles together. Sometimes, they lock talons and take a dramatic spiraling dive toward the ground.

7.) Red-tailed Hawk couples are experts at co-parenting. They build their nest together with sticks and leafy branches, often in a tree, but sometimes on a cliff ledge or building. The pair shares duties incubating their eggs for 28 to 35 days - though the female is usually the one sitting on the nest, while the male hunts. Once chicks are born, this division of labor continues: The male hawk catches prey and delivers it to the female, who feeds it to the young in small pieces.

8.) Red-tails are partial migrants. Most that breed in Canada, Alaska, and the northernmost Great Plains will fly south for the winter to other parts of North America. Others throughout the Lower 48 stay put all year. This means that in many parts of the country, Red-tailed Hawks become even more abundant in winter.



9.) Males are territorial and will screech in flight to stake out their space during nesting season. Often they defend a territory of about two square miles from other hawks. But in urban areas, Red-tails are living closer and closer together.

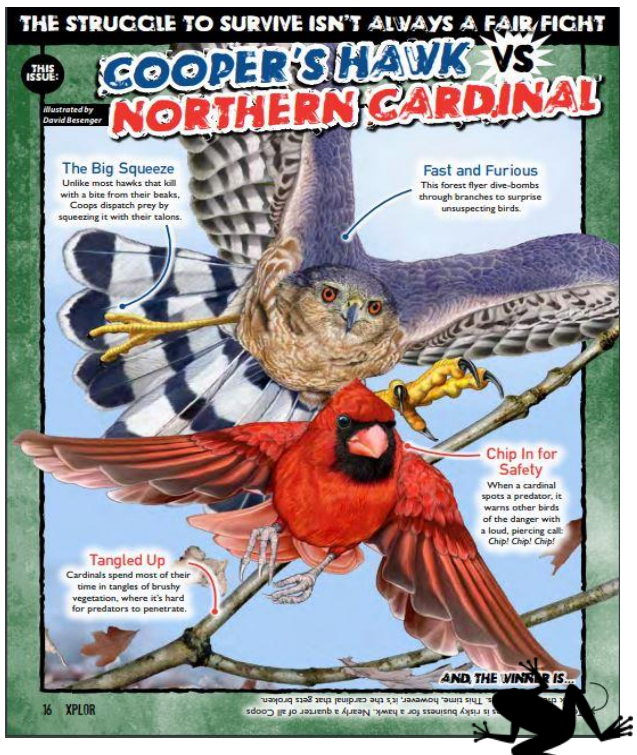
10.) Decades ago, one Red-tailed Hawk in New York City achieved celebrity status. Named Pale Male by residents, this bird stood out not only because hawks were far less common in the city then, but also because he was a light color morph with an almost-white head. New Yorkers generally agree he arrived in Manhattan in 1991, but there's impassioned disagreement about what's happened since. Some hawk-watchers maintain that Pale Male is still alive, while many others say there's no way he has survived so long in the big city.

Pale Male and his mate Lola in their Fifth Avenue aerie

For more about Red-Tailed Hawks, visit:

- https://www.audubon.org/field-guide/bird/red-tailed-hawk
- https://www.allaboutbirds.org/guide/Red-tailed_Hawk/
- https://ebird.org/species/rethaw
- https://abcbirds.org/bird/red-tailed-hawk/

Below is a Cooper's Hawk, a smaller raptor, but it catches food just like a red-tailed hawk.



Interior Department Announces Over $1.5 Billion to Support State Wildlife Conservation and Outdoor Recreation

https://www.doi.gov/pressreleases/interior-department-announces-over-15-billion-support-state-wildlife-conservation-and

In February, The U.S. Fish and Wildlife Service today announced a record $1.5 billion in annual funding through the Wildlife and Sport Fish Restoration (WSFR) Program to support state and local outdoor recreational opportunities, and wildlife and habitat conservation efforts.

The WSFR Program contains two funding sources: the Sport Fish Restoration and Boating Trust Fund, which was reauthorized as part of the Bipartisan Infrastructure Law, and the Wildlife Restoration Program.

"Hunters, anglers, and sportsmen and women have some of the deepest connections to nature. For 85 years, this program has been foundational to wildlife and habitat conservation and outdoor recreation throughout the country," said Deputy Secretary Tommy Beaudreau, "With the historic investments from President Biden's Bipartisan Infrastructure Law and opportunities through the Great American Outdoors Act, these grants will make significant progress in our work to protect our cherished wild treasures."

The WSFR Program, also known as Pittman-Robertson Dingell-Johnson/Wallop-Breaux, apportions excise taxes on hunting, shooting and fishing equipment, and boat fuel to all 50 states and U.S. territories. The core value of all WSFR Programs is fostering cooperative partnerships between federal and state agencies, working alongside hunters, anglers, and other outdoor interests, to enhance recreational opportunities while advancing sustainable resource goals.

These goals are consistent with President Biden's *America the Beautiful* initiative to support locally led efforts to conserve and restore our nation's lands, waters, and wildlife. The initiative's inclusive approach recognizes that hunters, fishers, private landowners, ranchers, farmers, Tribes, traditional land users, and everyone has a role to play in conservation to conserve America's lands and waters for future generations.

The Sport Fish Restoration and Boating Trust Fund is funded in part by the federal excise tax on fishing equipment and is the backbone of state-based fish conservation, benefiting all U.S. states and territories. The Wildlife Restoration Program, funded by the federal excise tax on guns, ammunition, and archery sales, provides grant funds to states and insular areas' fish and wildlife agencies for projects to restore, conserve, manage and enhance wild birds and mammals and their habitats. Projects include providing public use and access to wildlife resources, hunter education and development and management of shooting ranges.

"Many Americans are unaware of the remarkable conservation impact of the Wildlife and Sport Fish Restoration Program," said Fish and Wildlife Service Principal Deputy Director Martha Williams. "State wildlife agencies dedicate WSFR funds to a variety of conservation projects and programs such as hunting and fishing education, fish and wildlife management, scientific research, habitat restoration and protection, land and water rights acquisition, and hunting and boating access. Everyone benefits from these investments, which have ensured a legacy of wildlife and outdoor opportunities for all."

Congress authorizes Wildlife and Sport Fish Restoration disbursements through the Pittman-Robertson Federal Aid in Wildlife Restoration Act, and also the Dingell-Johnson/Wallop-Breaux Federal Aid in Sport Fish Restoration Act. To date, the Service has distributed more than $25.5 billion in apportionments for state conservation and recreation projects. Recipient state wildlife agencies have matched these funds with approximately $8.5 billion throughout the years, primarily through hunting and fishing license revenues.

Eligible states receive WSFR funds through formula-based permanent appropriations. The distribution formulas are based primarily on land and water area and the number of paid recreational hunting and fishing license holders in each state. State fish and wildlife agencies make their own management decisions about how the funds are used. The WSFR dollars typically fund up to 75% of project costs. Most states must provide a matching share of up to 25%, usually from state hunting and fishing license revenues.

State-by-state listing of the Service's final apportionment of Wildlife and Sport Fish Restoration program funds for Fiscal Year 2022 can be found on the WSFR webpage.

You can also visit WSFR on Facebook at https://www.facebook.com/USFWSWSFR

MI Department of Environment, Great Lakes & Energy (EGLE) Hosts Invasive Species Webinars

Even though Marinette County is in Wisconsin, we share waterways and landscapes with our Michigan neighbors, and what can affect them can affect us here in Marinette County. This webinar series may be of interest to Wisconsin residents wanting to learn more about invasive species in our area.

Invasive species pose a threat to Michigan (and Wisconsin's) environment, economy, and sometimes even human health. What is at stake? What is being done? This webinar series will explore how agencies, universities and locally led organizations are working together to protect Michigan's natural resources through the Michigan Invasive Species Program.

If you are concerned about the impacts of invasive species or interested in the techniques used to control them, join us as we examine species-specific actions, innovations in research and technology, and programs designed to help communities prevent and manage harmful invasive species.

***Upcoming webinars** *(* Eastern Time):*

March 24, 2022, 9:00 a.m. to 10:00 a.m.
Step aboard Michigan's Clean Boats, Clean Waters grant program
Looking for resources to help your community protect a local water body from aquatic invasive species? The Michigan Clean Boats, Clean Waters (CBCW) program provides $1k - $3k grants annually for groups interested in aquatic invasive species prevention through increased boater education and awareness.

April 14, 2022, 9:00 a.m. to 10:00 a.m.
New name, familiar pest: Preparing for *Lymantria dispar* (formerly known as Gypsy moth)
Join an expert panel to explore how *Lymantria dispar* (formerly Gypsy moth) became a naturalized resident in Michigan's forests. Guests will cover the unusual history of this pest in the United States and here in Michigan, and what you can do to reduce some of the unpleasant impacts of an outbreak.

May 12, 2022, 9:00 a.m. to 10:00 a.m.
Clean it up, drain it out, dry it off: Boating hygiene for the 21st century
Protecting Michigan's waters from aquatic invasive species is as simple as *Clean, Drain, Dry*. Guests provide live demonstrations of each step in the process and what tools you need to prevent the spread.

For information about invasive species in Wisconsin, visit:

- https://dnr.wisconsin.gov/topic/Invasives
- https://dnr.wisconsin.gov/topic/lakes/cbcw - WI Clean Boats, Clean Waters
- https://fyi.extension.wisc.edu/wifdn/ - WI First Detector Network
- https://www.seagrant.wisc.edu/our-work/focus-areas/ais/
- https://www.wrisc.org/ - Wild Rivers Invasive Species Coalition

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Outdoor Almanac

3
The furry, light-gray flowers of **pussy willow** burst from their buds.

4
Black Bears are emerging from their winter sleep and looking for food. Bears have excellent memories, so if you live in an area with bears, take down your bird feeders before the bears visit them.

6
Late winter is a great time to look for ducks. Along the coast you can find Common Eider, Harlequin Duck, scoters, and Long-tailed Duck. In open freshwater habitats look for Wood Duck, Gadwall, Ring-necked Duck, and Common and Hooded Merganser.

8
Several moth species overwinter as caterpillars, including the **woolly bear caterpillar** of the Isabella tiger moth. When the weather warms they can be found crawling up sticks and last year's stems looking for a good place to pupate.

10
Eastern cottonwood trees have large, sticky buds. In early spring, honeybees, which are not native, collect the resin to make propolis, a protective glue that they use to seal their hives.

12
Silver, red, and sugar maples are flowering. Maple flowers are wind pollinated and have no petals, but these tiny flowers are beautiful nonetheless.

14
American Woodcock nuptial flights begin about this time, as the snow melts back in open fields. Around sunset listen for the peent call and the whistle of wings.

16
Beaver have been eating the bark from the sticks they stored underwater last fall. When the ice melts, they come out to eat green plants including water lilies and skunk cabbage.

17
The first warm (40°F), rainy night will bring out the **salamanders** as they migrate from their winter burrows to vernal pools to mate. They spend only a short time at the pools and, soon after mating, head back to the uplands.

18
Full Moon

20
Vernal equinox: first day of spring. Night and day are of equal length.

22
Woodpeckers drill on dead trees both for food and to make nest holes. Pileated Woodpeckers, our largest woodpecker, make large, oblong holes as they follow the tunnels of carpenter ants, which are their favorite food.

26
Look and listen for tom turkeys gobbling and displaying. Their heads turn brilliant red and blue, they fan and waggle their tails, and drag their wings across the ground as they strut back and forth. When you find displaying toms, look around to find the hen, who is usually nearby but often hidden from view.

27
Nesting has begun for crows; they're among the earliest of the passerines (perching birds) to nest. Listen and watch as they interact with each other and eat almost anything they can find, from black walnuts to roadkill gray squirrels.

30
Tree Swallows return. Look for them scouting for nest boxes or tree cavities as breeding season begins.

Mass Audubon

massaudubon.org

Why are Some Feathers Blue?

https://www.smithsonianmag.com/science-nature/why-are-some-feathers-blue-100492890/

Everyone loves bluebirds, but did you know that the feathers themselves do not contain any blue pigment? How could this be? Feather coloration comes from light reflecting off two potential sources: pigments or feather structures (structural colors).

The red of a northern cardinal or yellow of a goldfinch comes from carotenoid pigments within their feathers. These pigments are from fruits and seeds in their diet. Similarly, black feathers of a crow or the brown of a cedar waxwing comes from melanin pigments in their feathers. Each pigment reflects the particular wavelengths of visible light (red, orange, yellow, green, blue, indigo, violet) that give them their respective color. *But what about blue?*

Well, there is no blue pigment in feathers. Rather, **blue is a structural color created by the reflection of blue wavelengths off structures (tiny air bubbles) within the feathers.** As sunlight contacts a bluebird feather, the blue wavelengths of visible light are reflected off these air pockets and - Voila! - the feather appears blue! This also explains why a blue bird looks grayish-brown in the shade, not blue. You can demonstrate this at home using a blue jay feather you might find in your yard.

Look at the top (outer) surface of feather in the sunlight and it will appear blue from the reflected blue wavelengths of light (top photo at right). Then go inside and hold the feather against a sunny window to backlight it.

The sunlight is no longer reflecting off the top of the feather towards your eyes and it will appear grayish-brown from melanin pigment in the feather (bottom photo below).

The Winter Life of the Skunk

https://northernwoodlands.org/outside_story/article/winter-skunk & https://www.facebook.com/people/Marinette-County-Land-Water-Conservation/100075727761451/

In summer, you always know when a striped skunk has been around. But in winter, these animals make themselves scarce, hunkering down to wait out the onslaught of ice and snow.

Unlike most rodents and birds, which hoard food for the cold months, the striped skunk will have spent the fall eating as much as possible so it can stay warm during mid-winter dormancy. This binge eating creates thick layers of fat underneath the skin – a winter jacket, of sorts. The skunk metabolizes this fat during its dormant rests, though at a much slower rate than in summer.

Striped skunks use different den sites at different times of year, so their winter burrow will usually not be the same place where they raised their young. While capable of digging their own winter burrows, skunks are more inclined to seek residency in spaces that belong to someone else.

For example, they find comfort underneath human-built porches or decks, a fact that some of us (and our noses) may be all-too-familiar with. Those skunks that live away from residential areas will often commandeer burrows dug and deserted by other outdoor dwellers, such as woodchucks or foxes.

Once colder temperatures set in, a skunk will prepare its den by blocking off the entrance to its burrow with leaves and grass to keep the cold air out. It isn't uncommon for striped skunks to burrow with each other for extra warmth – these cohabitating skunks have the advantage of social thermoregulation, where they use each other to stay warm. Males sometimes den communally during winter, but are not tolerant of each other during other seasons.

Settled into its winter home, the striped skunk becomes dormant, but does not enter a full state of hibernation. Instead, skunks enter a state of torpor – a sort of deep sleep from which they awake from time to time. During torpor, which is influenced by the temperature and food availability, their body temperatures can drop 20 degrees and their metabolism slows.

As the season changes from winter to spring, skunks will emerge and seek a mate. Striped skunks are a polygamous species and a male will take multiple mates over the course of late February through April. A female will only mate once. After breeding, both males and females seek to rebuild fat reserves, having lost, on average, about 30 percent of their body weight during winter. Females will establish maternity dens, sometimes communally. Males spend the warm months alone.

The arrival of spring brings not only warmer weather, but new food sources. The omnivorous skunk goes from a lean winter diet of carrion, fruit, and seeds to a summer diet rich in insects, small mammals, and sometimes our trash. As bee keepers are well aware, skunks have a fondness for bees and will consume honey, larvae, and adults.

The scientific name for the striped skunk is *Mephitis mephitis*, meaning "bad odor." The word "skunk" itself is one of the few Algonquin Indian words to enter the English language. Prior to 1997, skunks were classified as weasels (family *Mustelidae*), but DNA and molecular evidence recognized they were unique. They were then classified in the family *Mephitidae*.

<u>More about Skunks:</u>

- The male is a Buck, the female is a Doe, and the baby is called a Kit
- They are nocturnal creatures that sleep by day and hunt at night.
- They are omnivores that consume both plant and animal
- They are notorious for their terrible smell
- The entire tail is black with white tips, and when it is raised, it fans out to the sides. They use their tail to communicate with other members of their species.
- They eat small rodents, toads, lizards, snakes, worms, and insects.
- Their eyesight is poor, but they have excellent hearing and an excellent sense of smell.
- During the breeding season, females usually give birth one time a year.
- They usually sleep during the day and look for some food at night.

➢ https://animaldiversity.org/accounts/Mephitidae/

➢ https://www.pbs.org/wnet/nature/is-that-skunk-mephitidae-this-family-stinks/

➢ http://www.nhptv.org/wild/mephitidae.asp

Wisconsin Wolves Relisted as Endangered

https://dnr.wisconsin.gov/newsroom/release/53316

The Wisconsin Department of Natural Resources (DNR) announced that following a U.S. District court's ruling on Feb. 10 returning wolves in the lower 48 states (except the northern Rocky Mountains region) to the Federal Endangered Species List, Wisconsin is not authorized to implement a wolf harvest season. The DNR is reviewing the ruling to determine how it impacts hunters and trappers who purchased licenses for the fall 2022 wolf hunt.

Wisconsin's wolf population remains healthy and secure in the state. The department will continue its robust wolf population monitoring program to ensure the population remains healthy and sustainable into the future.

The DNR will also continue working towards promulgation of rules and the completion of a wolf management plan to guide management decisions. The DNR is reviewing the decision to determine how it impacts Wisconsin's wolf management program. Other immediate implications of this ruling include the following:

- Permits allowing lethal removal of wolves issued to landowners experiencing wolf conflicts are no longer valid. The department will contact permit holders directly.
- The department is not authorized to use lethal control as part of its conflict management program. Non-lethal tools remain available.
- The training of dogs to track and trail wolves is not allowed. Dog hunters may no longer pursue wolves for training purposes.

The DNR remains committed to assisting individuals that experience conflicts with wolves through an interagency cooperative agreement with USDA-Wildlife Services for abatement and control.

If you suspect wolves in the depredation of livestock, pets or hunting dogs, or if wolves are exhibiting threatening or dangerous behavior, contact USDA-Wildlife Services staff immediately. If in northern Wisconsin, call 1-800-228-1368 or 715-369-5221; if in southern Wisconsin, call 1-800-433-0663 or 920-324-4514.

For more on wolves in Wisconsin, visit the DNR website for additional information on wolf management and wolf conflict abatement. For more on this topic, also visit:

- https://www.publicnewsservice.org/2022-02-14/endangered-species-and-wildlife/experts-propose-new-methods-for-managing-wi-wildlife/a77860-1
- https://biologicaldiversity.org/species/mammals/pdfs/Wolf-Order-2022-02-10.pdf

Watch the Path of a Raindrop from Anywhere in the World

https://www.goodnewsnetwork.org/watch-the-path-of-a-raindrop-from-anywhere-in-the-world/

Have you ever wondered how far raindrops travel after they fall upon the heights of Kilimanjaro? On the off chance you're dying to know, some curious cartographers have created a mapping tool that visualizes the path a raindrop will take to the sea from anywhere on Earth.

River Runner Global is a free, open-source tool for visualizing how interconnected we are, and can be used quickly for rough-draft water management planning, or for educational purposes.

Data analyst Sam Learner built the project using data from the U.S. Geological Survey, along with help from Kyle Onda, a data architect for the water data and management consultancy Internet of Water. "There's something really interesting about ending up in little pockets of the country or world that you don't know about at all, in interesting terrain," said Learner. "What we put in a river or stream ends up in someone else's water."

There's plenty of surprises following the path of a raindrop, for example all the water that feeds Washington D.C. comes from rainfall and upwelling springs on the western-side of the Appalachians, and before any snowmelt on Mount Everest can reach the Ganges, it has to flow eastward across the top of India for more than 300 kilometers to find a point where the Himalayas split.

The mechanism for processing and displaying the data using bulk topographical info didn't exist, and so Learner had to build it himself. The tool is still in beta, and so place and river names often won't appear. It's subject to lag and occasional bugs as well, but Learner says the same back-end data could be used to create another tool, such as a 'River Climber' page that follows a path upriver to show the source of what needs protecting.

The team have found some pretty famous and interesting waterways so far, which the developers have shared in a Google doc for anyone to quickly take a look at.

How to Increase Your Kids' Outdoor Time

https://www.treehugger.com/how-increase-kids-outdoor-time-5216958

The benefits of outdoor play are, by now, fairly well-understood by parents and educators. We know that it's pretty much the best thing you can do for kids' physical and mental well-being; that vigorous, prolonged, and consistent outdoor playtime promotes development and boosts health; and that it makes children happier and easier to manage when they come back inside.

Despite knowing this, it continues to be a struggle for many parents, teachers, and families to find time to fit outdoor playtime into their days. There's never a convenient time, or other extracurricular activities take priority when a choice must be made. Kids suffer as a result, deprived of this crucial component of childhood.

Start thinking of it as a necessity.
If you start viewing daily outdoor play as being as important as a meal or a good night's sleep, you'll start to find more time for it. Think of it as nonnegotiable; no "extra" things should happen until outdoor playtime has been checked off the list.

Replace organized activities with unorganized ones.
Instead of packing your after-school calendar with sports and play dates, cancel those for at least several days a week and tell your kids they need to play outside instead. Make it a rule. Set a timer.

Every little bit counts.
If you only have a few minutes, take advantage of that. Send kids outside for five or ten minutes to blow off steam, run around the block, wrestle in the snow, or dig a hole. It doesn't take much to make a big difference.

Mandate outdoor family time on weekends. Schedule an activity every week - block off the time and don't skip it, even when the temperature drops. It has benefits it has for everyone - exercise, fresh air, tremendous satisfaction, and family bonding.

Organize a play date. Tell the other parent that you'd like the kids to play outside and that the friend should be dressed appropriately. Other parents are often hugely appreciative of this, as they want their kid outside, too.

Don't be afraid of darkness during shorter days.
This shouldn't stop you from sending kids out to play in a safe yard where they're not at risk from cars. Do a quick before-school or after-dinner play, or take them for a nightly pre-bedtime walk if you're in a busy urban setting. Think hide & seek, catching fireflies, etc.

Older kids can get a part-time job that gets them outside.
How about dog-walking for neighbors, washing cars, yard work/gardening, etc. Other ideas could be a paper route, shoveling snow, or assisting a senior neighbor in some capacity.

Walk to and from school.
The more outdoor time that can be worked into a kid's day, the better they'll feel and do. Train your kids from a young age to learn the best and safest route by accompanying them, then let them do it solo when they feel ready (and you agree that they are).

Play outside before school.
If you must drive, send your kids outside ten or fifteen minutes ahead of schedule. It'll give them a chance to burn off energy, and you'll have a few precious minutes to get organized before leaving for drop-off.

Spend time with your kids outdoors.
If you go outside, younger ones in particular will want to be there, too. Make it fun by lighting a campfire in the backyard or setting up a camp stove to make hot chocolate or hot apple cider. Have a picnic. Work in a garden together. You can even just sit and read a book while your kids buzz around nearby - you can be present without being engaged.

Take advantage of urban parks.
These are a rich resource in cities that are often under-appreciated and underutilized. Make it a ritual to go there with your kid on a set day each week, tailoring your activities to the season and climate. Make it something you both look forward to.

Invest in making your yard more appealing, if you have one.
Basketball nets, a trampoline, a big mud pit for digging, a treehouse, bicycles, scooters - all things that make them want to go outside and play. This is money well-spent (and money not spent on electronics). Speaking of which...

Ditch the electronics.
Yes, I know everyone rolls their eyes and thinks, "That's impossible," but have you ever thought of actually doing it? It's not nearly as extreme as you may think; what's extreme is how much time *everyone else* spends staring at their devices when they could be outside building fabulous snow forts or building skateboard jumps in the driveway.

If you put the effort in to create time for outdoor play, you'll reap the benefits in more ways than you can possibly imagine.

Become a Wisconsin Master Naturalist!

https://wimasternaturalist.org/

WISCONSIN Master Naturalist

The Wisconsin Master Naturalist program supports a network of well-informed volunteers and instructors dedicated to conservation service, leadership, and lifelong learning. Through expert-led trainings out in nature and in the classroom, Master Naturalists are equipped to address environmental challenges facing the state, and help make a positive impact through stewardship, citizen science, and educational activities.

Supported through the University of Wisconsin–Madison Division of Extension, the Master Naturalist program promotes awareness, understanding, and stewardship of the natural environment by developing a network of well-informed volunteers dedicated to conservation service within their communities.

Who are Master Naturalists?

Master Naturalists come from all walks of life – college students, retirees, teachers, farmers, hunters, nature guides, professionals, young parents – and represent all levels of knowledge about the natural world. They help monitor weather, maintain trails, teach children about pollinators, and so much more.

What do Master Naturalists Do?

A whole lot! After their training, Master Naturalists provide and support educational opportunities, gather data as citizen scientists, and help take care of Wisconsin's land and water. Many Master Naturalists are involved with multiple organizations and activities. We help find opportunities for Master Naturalists looking for new connections with organizations across the state.

How do you become a Master Naturalist?

To become a Master Naturalist, individuals complete 40 hours of expert-led training at locations across the state. Equipped with new knowledge, experiences, and connections, Master Naturalists then go on to serve stewardship, citizen science, and education efforts in Wisconsin and continue their learning through advanced trainings.

Learn more about our training.

Master Naturalist training is a 40-hour series of sessions and field trips that presents a consistent, statewide perspective on Wisconsin's natural resources, ecological processes, and conservation issues. Trainings are offered across the state through partners and host organizations, and although each takes on the unique flavor of the region, the following key topics remain consistent across trainings:

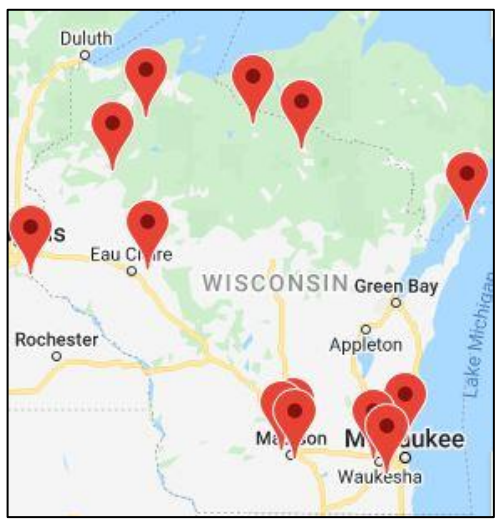
- Geology
- Ecology
- Plant communities
- Wildlife
- Interpretation
- Water
- Aquatic life
- Human impacts

To synthesize and implement their knowledge, participants will work in small groups to complete a small training project related to education/interpretation, stewardship, or citizen-science. The training project is a fun, low-stakes opportunity to try out volunteer activities in a supportive environment.

Examples of training projects include: developing and delivering a public presentation at a state park, collecting native seeds for an organization's restoration efforts, or participating in a frog and toad survey.

Master Naturalist trainings are open to all adults over 18 years of age with a $275 registration fee. Need-based scholarships are available through this application process prior to registering. Trainings are primarily outdoor learning experiences in a variety of conditions and locations, please contact info@wimasternaturalist.org if you have questions about the activity level.

Typically, 10-15 Master Naturalist trainings are held across the state annually, and their locations, dates, and schedules vary based on the host organization. Registration begins on the second Monday every January. Some of the trainings currently have wait lists, but others still have openings.



Host Organizations

Organizations across the state partner with the Master Naturalist program by hosting the volunteer training at their location. These organizations often provide volunteer opportunities in environmental education and interpretation, stewardship or citizen science and include nature centers, parks, "Friends of" groups, field stations, museums, government agencies, non-profits.

Stakeholder Organizations

Master Naturalists provide service to over 650 stakeholder organizations across the state. These programs range from local watershed groups to statewide natural resources organizations and offer citizen science, stewardship, and educational programming opportunities. Track large carnivores, participate in a prescribed burn, or lead an educational program for youth! The Master Naturalist program can connect you with a stakeholder organization and volunteer opportunity that feels right for you.

National Invasive Species Week, February 28-March 4th

https://www.nisaw.org/

North American Invasive Species Awareness Week (NISAW) 2022

NISAW is an international event to raise awareness about invasive species, the threat that they pose, and what can be done to prevent their spread. NISAW is powered by The North American Invasive Species Management Association (NAISMA), which supports local, state, and regional organizations to make NISAW their own with these tools:

Outreach and Communications

NAISMA encourages local, state, and regional organizations to use the FREE NISAW toolkit of outreach and communications resources to raise awareness of local invasive species concerns to elected officials, agency leadership, and the public. NAISMA's emails, social media posts, and digital advertising campaign aims to reach 500,000 viewers.

Educational Invasive Species Webinars

NAISMA hosts educational webinars on priority invasive species issues the week of NISAW and the 3rd Wednesday of each month. Other organizations may host webinars also. Get more information and register on the NISAW events page.

Congressional Briefings

NISAW provides an opportunity for organizations to hold formal briefings for Congressional staff to educate and inform on a specific topic or bill.

Individual Meetings

NISAW provides an opportunity for individuals and organizations to meet with elected officials and agency leadership to communicate priorities for invasive species legislation, funding, policy, and management.

For more about invasive species week:

- https://www.wrisc.org/ - Wild Rivers Invasive Species Coalition
- https://www.invasivespeciesinfo.gov/- US Dept. of Agriculture